AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:

receiving a sensor signal comprising a raw sensor value from a sensor, the raw sensor value associated with a position of a manipulandum in a range of motion;

calculating ~~determining~~ an adjusted sensor value based at least in part on the raw sensor value and a compliance between the sensor and the manipulandum; and

outputting an output signal comprising the adjusted ~~raw~~ sensor value.

2. (Original) A method as recited in claim 1, wherein the compliance is associated with a compliance constant and a current output force.

3. (Original) A method as recited in claim 1, further comprising determining a closed-loop position-dependent force based at least in part on the raw sensor value.

4. (Currently Amended) A method as recited in claim 1, ~~wherein~~ further comprising transmitting forces from an actuator to the manipulandum with a belt drive.

5. (Original) A method as recited in claim 1, further comprising filtering the raw sensor value for overshoot sensor values occurring at limits to the range of motion of the manipulandum.

6. (Original) A method as recited in claim 1, further comprising calibrating the range of motion of the manipulandum by adjusting minimum and maximum values of the range of motion based at least in part on the extent of motion of the manipulandum up to a designated time.

7. (Previously Presented) A method as recited in claim 1, further comprising normalizing the raw sensor value to a normalized range of motion, wherein the adjusted sensor value is further associated with the normalized raw sensor value.

8. (Currently Amended) A device comprising:

a manipulandum;

a linkage mechanism providing a degree of freedom to the manipulandum;

a sensor operable to sense a position of the manipulandum in the degree of freedom and to output a raw sensor value representing the position; and

a processor, operable to:

receive a sensor signal from the sensor, the sensor signal comprising the raw sensor value;

calculate ~~determine~~ an adjusted sensor value based at least in part on the raw sensor value and a compliance between the sensor and the manipulandum; and

output an output signal comprising the adjusted sensor value.

9. (Original) A device as recited in claim 8, wherein the linkage mechanism includes a chain of four rotatably-coupled members coupled to ground at each end of the chain.

10. (Previously Presented) A device as recited in claim 8, further comprising an actuator coupled to the linkage mechanism, the actuator operative to output a force in the degree of freedom.

11. (Original) A device as recited in claim 9, further comprising a belt drive transmission coupled between the actuator and the linkage mechanism.

12. (Original) A device as recited in claim 8, wherein the sensor comprises a relative digital encoder.

13. (Original) A device as recited in claim 8, wherein the sensor is coupled to the actuator such that the sensor is operable to detect rotation of a shaft of the actuator.

14. (Original) A device as recited in claim 8, wherein the processor is operable to calibrate the range of motion of the manipulandum by adjusting minimum and maximum values of the range of motion based at least in part on the extent of motion of the manipulandum up to a designated time.

15. (Original) A device as recited in claim 8 wherein the processor is operable to determine a closed-loop force based at least in part on the raw sensor value.

16-32. (Cancelled)

33. (New) A computer-readable medium on which is program code, comprising:

program code for receiving a sensor signal comprising a raw sensor value from a sensor, the raw sensor value associated with a position of a manipulandum in a range of motion;

program code for calculating an adjusted sensor value based at least in part on the raw sensor value and a compliance between the sensor and the manipulandum; and

program code for outputting an output signal comprising the adjusted sensor value.

34. (New) The computer-readable medium as recited in claim 33, wherein the compliance is associated with a compliance constant and a current output force.

35. (New) The computer-readable medium as recited in claim 33, further comprising program code for determining a closed-loop position-dependent force based at least in part on the raw sensor value.

36. (New) The computer-readable medium as recited in claim 33, further comprising program code for transmitting forces from an actuator to the manipulandum with a belt drive.

37. (New) The computer-readable medium as recited in claim 33, further comprising program code for filtering the raw sensor value for overshoot sensor values occurring at limits to the range of motion of the manipulandum.

38. (New) The computer-readable medium as recited in claim 33, further comprising program code for calibrating the range of motion of the manipulandum by adjusting minimum and maximum values of the range of motion based at least in part on the extent of motion of the manipulandum up to a designated time.